

# MANUFACTURING EXTENSION PARTNERSHIP

## Success Stories from the Field

### Brunswick Box Company

#### Virginia's A.L. Philpott Manufacturing Extension Partnership

#### Assembly Automation Improves Efficiency At Brunswick Box Company

##### Client Profile:

Brunswick Box Company, Inc., established in 1952, is one of Virginia's largest manufacturers and distributors of quality wood pallet and specialty wood products. Based in Lawrenceville, Virginia, the company employs approximately 75 people. Brunswick Box Company serves the U.S. government, tier-one government contractors, soft drink and beverage manufacturers, and the building materials, textile, pharmaceutical, and health care industries, among others.

##### Situation:

Brunswick Box Company (BBC) manufactures a special pallet for a major U. S. government ammunition supplier. The pallet includes re-enforcement pads, known as truss plates, on the six end sections to prevent damage during the handling and distribution cycle. BBC's original design required a laborer to manually hammer each of the truss plates to the solid oak wood pallet. However, this system was expensive and inefficient, and the company wanted to automate the procedure. When Virginia's A.L. Philpott Manufacturing Extension Partnership (VPMEP), a NIST MEP network affiliate, heard about BBC's problem, it arranged for BBC to meet with experts from the Technology Applications Center (TAC). TAC is VPMEP's service delivery partner responsible for manufacturers in the Tidewater region, and is based at Old Dominion University.

##### Solution:

TAC helped BBC to design and build an automated fixture allowing for the assembly of all six truss plates to the solid oak pallet end blocks. This fixture is flexible enough to handle five unique pallet sizes with quick change-over features. TAC verified the fixture's design parameters based on tests performed on a pallet and truss plate sample. The finished design is capable of simultaneous assembly of six truss plates to oak pallet end blocks, works from a single point of operation, and is fabricated with steel components sized for commercial use.

Now, all six truss plates can be installed in under one minute, and it takes less than five minutes to change over from one pallet to another. The pallets are now equipped for rugged handling, saving both BBC and the end-user the cost of damage and premature pallet failures.

##### Results:

# MANUFACTURING EXTENSION PARTNERSHIP

## Success Stories from the Field

Designed an automated fixture to streamline product assembly.  
Dramatically improved efficiency.  
Saved costs in materials, labor, and liability.

### **Testimonial:**

"We had used Virginia's A.L. Philpott Manufacturing Extension Center for other projects in the past, so when this project came up they were the first group we contacted. VPMEP, in concert with the Technology Applications Center, did a very professional job from the early planning stages through the final testing. Since putting this machine in the operation, Brunswick Box Company has been able to streamline its production of these pallets and therefore reduce our labor costs and provide our customer with a better product."

Mark P. Lucy, Plant Manager